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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/656,325	09/06/2000	Steven D. Nelson	14073US01	9079

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EXAMINER

CHAMBERS, TROY

ART UNIT	PAPER NUMBER
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3641

DATE MAILED: 08/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/656,325	NELSON ET AL.	
	Examiner	Art Unit	
	Troy Chambers	3641	<i>MW</i>

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims 31, 32

- 4) ☒ Claim(s) 1, 4-13, 33, 34 and 62-67 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1, 4-10, 12, 13, 33, 34, 62-64, 66 and 67 is/are rejected.
- 7) ☒ Claim(s) 11 and 65 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 September 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the serial network, cable cutter and bolt cutter must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1, 4-10, 12, 33, 34, 64, 66 and 67 are rejected under 35

U.S.C. 102(e) as being anticipated by WO 01/42732 issued to Bokvist.

2. With respect to claim 1, Bokvist expressly discloses a networked electronic ordnance system, comprising: a plurality of electronic detonators 10, connected by a network, each device 10 comprising a logic device (status register is a kind of logic device, pg. 13, ll. 17-20) and having a unique identifier (pg. 5, ll. 19-25); and a bus controller 11, 12, said controller capable of addressing any combination of detonators 10 via said unique identifier (pg. 5, ll. 25-34).

3. With respect to claim 4, Bokvist inherently discloses a bus controller 11, 12 that receive multiplexed signals. Multiplexed signals are several messages or signals transmitted simultaneously on the same circuit or channel.

4. With respect to claim 5 and 8, Bokvist expressly discloses energy reserve capacitors C1-C3 (Fig. 4).

5. With respect to claim 6 and 9, Bokvist expressly discloses bleed resistors R3-R5 (Fig. 4).

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6. With respect to claim 7, Bokvist inherently discloses a pyrotechnic device 10 having a pyrotechnic assembly, and an adjacent electronic assembly electrically connected to said logic device (Figs. 1 and 4).

7. With respect to claim 10, Bokvist expressly discloses a bus interface J1, J2, Lin 1 and Lin2.

8. With respect to claim 12, Bokvist expressly discloses a network connected in parallel (Fig. 1).

9. With respect to claims 33, 34, 66 and 67, Bokvist expressly discloses a networked electronic ordnance system as discussed in claim 1. The means for altering an analog condition and means for transmitted a digital firing command are anticipated by the bus controller 11, 12. Each pyrotechnic device does not detonate until 1) a unique code has been received, and 2) adequate power supply has been provided by the controller via the bus line (pg. 31, line 36 to pg. 32, line 5).

10. With respect to claim 64, Bokvist expressly discloses the networked electronic detonators 10 of claim 1 included one having the ability to be non-detonating. The detonators 10, remain non-detonating (from factory to storage) until the proper commands are given to detonate.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which

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said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bokvist in view of U.S. 5606664 issued to Brown. Bokvist discloses a networked electronic ordnance system as described above. However, a twisted shielded cable is not disclosed. Brown discloses such a cable for a local area network (Abstract). At the time of the invention, one of ordinary skill in the art would have found it obvious to provide the system of Bokvist with the cable of Brown. The suggestion/motivation for doing so would have been to provide the ordnance system of Bokvist with protection against outside electrical interference which could potentially detonate one of the plurality of detonators 10.

13. Claims 31, 32, 62 and 63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bokvist in view of U.S. 4674047 issued to Tyler. Bokvist discloses a networked electronic ordnance system as described above. However, Bokvist does not disclose a two-part security code. Tyler discloses such a feature. Specifically, Tyler discloses a detonator having a two-part security code comprising a factory-installed security code in addition to a unit identification code. While the factory code is not programmable by the controller, the unit identification code is (Abstract, col. 7, ll. 5-34 and col. 18, line 46 to col. 19 line 2). At the time of the invention, one of ordinary skill in the art would have found it obvious to provide the system of Bokvist with the ability to program the detonators as disclosed by Tyler. The suggestion/motivation for doing so would have been to increase security by having a part of the code known only by (and in the possession of) the manufacturer (col. 2, ll. 4-10).

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Allowable Subject Matter

14. Claim^s 11 and 65 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Troy Chambers whose telephone number is (703) 308-5870. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael J. Carone, can be reached at (703) 306-4198.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-4177. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.


3641
JACK KEITH
PRIMARY EXAMINER